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EXAMINER	
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ART UNIT	**PAPER NUMBER**
2662	

DATE MAILED: 09/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/016,867	SHAFFER ET AL.	
	Examiner	Art Unit	
	Hao X. Nguyen	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 December 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 11, 15, 16, 18, 19, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abdollahi et al. (US Pub. No. 2003/0035425 A1), in view of Woodall (US Pub. No. 2003/0081556 A1).

In regards to claims 1, 11, 16, and 32,

Referring to Figures 1 and 7, Abdollahi discloses a broadcast satellite network that transmits from the source (manager node 212) to remotes sites 202 real-time program information and best-effort data (abstract; paragraphs [0058], [0059], [0067],

[0070], [0102] and [0105]; claims 1, 11, and 32 – comprising: establishing a communication session between a first endpoint and a second endpoint).

Referring to Figure 8, Abdollahi discloses a manager node 212, in step S212, periodically transmits an SNMP "keep-alive" message for each open session to a respective router node 230 (paragraph [0112]; claims 1, 16, and 32 - receiving keep alive signals from the first endpoint in a communication with a second endpoint).

Abdollahi also discloses the router node 230 that stops receiving messages for a session when it does not timely receive the keep-alive message (paragraph [0112]; claims 1, 16, and 32 - detecting an interruption in the keep alive signals).

Abdollahi discloses the above limitations of claims 1, 11, 16, and 32 but it does not disclose maintaining connection with the second endpoint after the interruption, and reestablishing the communication session between the first endpoint and the second endpoint if the keep alive signals resume within a predetermined time period.

Woodall discloses network fault management. Referring to Figure 4, Woodall discloses a communication session is at a normal state 400. If there is a fault in the session, the fault detection and reporting logic will move from the normal state to a fault detected state 402. During state 402, the communication session is maintained and the recovery process begins (paragraph [0038]; claims 1, 16, and 32 - maintaining connection with the second endpoint after the interruption).

Referring to Figures 1 and 4, Woodall discloses the network manager 130 may be a server receiving fault reports or messages from client/agent software or logic that is running on the switch (102 or 104). During the fault detected state 402, standardized

protocols and algorithms implemented in the switch, will be used by the switch to attempt to recovery from the fault (paragraphs [0027] and [0038]; claim 11 - receiving from user the first endpoint message to reestablish the communication session).

Referring to Figure 4, Woodall discloses a switch that in state 402 will use standardized protocols and algorithms to attempt to recovery from the fault, such as a loss of signal at a port of the switch. Upon beginning the recovery process, a timer is started as shown at state 404. If the switch is able to make a complete recovery from the fault before the time out, the switch goes back to the normal state 400 (paragraphs [0027] and [0038]; claims 1, 11, 16, and 32 - in response to the message, reestablishing the communication session between the first endpoint and the second endpoint if the keep alive signals resume within a predetermined time period).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the communication session of Abdollahi by maintaining the session while attempting to establish the session between the endpoints if the keep alive signals resume within a predetermined time period as shown by Woodall. This would enable the keep-alive session of Abdollahi to recover from faults without the need to re-initialize while providing necessary time to recover from the fault, in the event that the session is unable to recover from the fault immediately (Woodall; paragraph [0038]).

In regards to claim 15,

Abdollahi discloses substantially all the claim limitations but it does not disclose the method steps that are performed by logic embodied in a computer readable medium.

Referring to Figure 4, Woodall discloses a logic of establishing and recovering a session that is in a switch (paragraphs [0037] and [0038]; claim 15 - the method of claim 11, wherein the steps are performed by logic embodied in a computer readable medium).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the communication session of Abdollahi by having session reestablishment logic embodied in a computer readable medium as shown by Woodall. This would enable the computer to complete a fault recovery process consistently. (Woodall; paragraph [0038]).

In regards to claim 18,

Abdollahi discloses the above limitations of claim 16 but it does not disclose the communication device that comprises a call manager.

Referring to Figure 1, Woodall discloses a network manger 130 that may be server receiving fault reports or messages from client/agent software or logic, running on switches (102 or 104), processor boards (106-130) or in channel input/output devices (122-128) (paragraph [0027]; claim 18 - the communication device that comprises a call manager).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the communication session of Abdollahi by having the communication device that comprises a call manager as shown by Woodall. This would enable the call manager to be the server for client software that is running on switches, processor boards, and channel input/output devices. (Woodall; paragraph [0027]).

In regards to claim 19,

Referring to Figure 1, Abdollahi discloses a point-to-point connection that is between a router 216 and a LAN (paragraph [0044]; claim 19 - the communication session comprises a point-to-point communication session).

Claims 3, 13, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abdollahi et al., in view of Woodall, and further in view of Buhler et al (US Pat. No. 6,404,741 B1).

In regards to claim 3 and 34,

Abdollahi discloses the above limitations of claims 1 and 32 but it does not disclose the second end point to be notified that the first end point has failed.

Woodall discloses a network fault detection and reporting logic that is provided in each switch and in each network interface card. The logic components implement routines that facilitate the identification, reporting and isolation of faults at various points in the network (paragraph [0028]; claims 3 and 34 - notifying the second endpoint that the first endpoint has failed).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the communication session of Abdollahi by having the second end point to be notified that the first end point has failed as shown by Woodall. This would enable the second end point to communicate with the network manager through a path not involving the first end point (Woodall; paragraphs [0027], [0028], [0029], and [0030]).

Abdollahi and Woodall disclose the above limitations of claims 1, 3, 32, and 34

but Abdollahi and Woodall do not disclose a message that is communicated to the first end point instructing the first end point to reboot.

Referring to Figure 1, Buhler discloses a packet telephony device that may be configured to reboot or reset with only absolutely necessary software when it is instructed to do so by the control device (column 3, lines 50-59; claims 3 and 34 – communicating a message to the first end point instructing the first endpoint to reboot).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the communication session of Abdollahi and Woodall by communicating a message to the first endpoint instructing the first endpoint to reboot as shown by Buhler. This would ensure the first endpoint to return to a controllable state after being crashed (Buhler; column 3, lines 50-55).

In regards to claim 13,

Abdollahi discloses the above limitations of claim 11 but it does not disclose the act of waiting a predetermined period of time for the first endpoint to reset, and of reestablishing the communication session between the first endpoint and the second endpoint if the first endpoint successfully resets during the predetermined period of time.

Referring to Figure 4, Woodall discloses a switch that in state 402 will use standardized protocols and algorithms to attempt to recovery from the fault, such as a loss of signal at a port of the switch. Upon beginning the recovery process, a timer is started as shown at state 404 (paragraphs [0027] and [0038]; claim 13 – waiting a predetermined period of time for the first endpoint to reset).

Woodall also discloses a switch that goes back to the normal state 400 if the switch is able to make a complete recovery from the fault before the time out (paragraphs [0027] and [0038]; claim 13 – reestablishing the communication session between the first endpoint and the second endpoint if the first endpoint successfully resets during the predetermined period of time).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the communication session of Abdollahi by waiting a predetermined period of time for the first endpoint to reset, and reestablishing the communication session between the first endpoint and the second endpoint if the first endpoint successfully resets during the predetermined period of time as shown by Woodall. This would ensure that the network can make a complete recovery from the fault (Woodall, paragraph [0038]).

Abdollahi and Woodall disclose the above limitations of claims 11 and 13 but Abdollahi and Woodall do not disclose an act of instructing the first end point to reset.

Referring to Figure 1, Buhler discloses a packet telephony device that may be configured to reboot or reset with only absolutely necessary software when it is instructed to do so by the control device (column 3, lines 50-59; claims 13 - instructing the first endpoint to reset).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the communication session of Abdollahi and Woodall by instructing the first endpoint to reset as shown by Buhler. This would ensure the first endpoint to return to a controllable state after being crashed (Buhler; column 3, lines 50-55).

Claims 2, 4-10, 12, 17, 21-31, 33, and 35-39 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Abdollahi et al., in view of Woodall, and further in view of Rahman (US Pat. No. 6,671,883 B1).

In regards to claims 2, 17, and 33,

Referring to Figure 8, Abdollahi discloses a session that would end due to a time out if a keep-alive message is not timely received (paragraph [0112]; claims 2, 17, and 33 - if the keep alive signals not resume within the predetermined time period).

Abdollahi discloses the above limitations of claims 1, 2, 16, 17, 32 and 33 but it does not disclose transferring the communication session with the second endpoint from the first endpoint to third endpoint (if the keep alive signals do not resume within the predetermined time period).

Referring to Figure 1, Rahman discloses a first head end 120 that is connected to a settop box 110. When the session between the first head end 120 and the settop box 110 is lost, the settop box 110 is connected to a second head end 160 (column 2, lines 40-57; claims 2, 17, and 33 - transferring the communication session with the second endpoint from the first endpoint to third endpoint).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the communication session of Abdollahi by transferring the communication session with the second endpoint from the first endpoint to third endpoint if the keep alive signals not resume within the predetermined time period as shown by Rahman. This would enable a viable connection with a target network (Rahman; column 2, lines 49-54).

In regards to claims 4, 7, 35, and 37,

Abdollahi and Woodall disclose the limitations of claims 2, 6, 32 and 36 but Abdollahi and Woodall do not disclose the first endpoint to be associated with user directory relating a plurality of users a plurality of endpoint, the third endpoint to be also associated with the user in the directory, determining the user associated with the first endpoint using the directory, determining that the third endpoint is also associated with the user, and selecting the third endpoint for the communication session.

Referring to Figure 3, Rahman discloses a database 330 that stores identifier of head ends, a settop box, and a target network (column 6, lines 50-59; claims 4, 7, 35, and 37 - the first endpoint associated with user directory relating a plurality of users a plurality of endpoint).

The second head end is capable of being coupled to both the settop box and the target network (column 6, lines 57-59; claims 4, 7, 35, and 37 - the third endpoint is also associated with the user in the directory).

A communication manager waits for a message that extracts information from the database 300 including at least one of a settop box identifier, a first head end identifier and a target network identifier (column 6, lines 16-19, and 47-49; claims 4, 7, 35, and 37 – and the method further comprises: determining the user associated with the first endpoint using the directory).

The selector uses the database 300 to select a second head end that is capable of being coupled to both the setup box and the target network (column 6, lines 53-59;

claims 4, 7, 35, and 37 - determining that the third endpoint is also associated with the user).

Referring to Figure 1, Rahman discloses a first head end 120 that is connected to a settop box 110. When the session between the first head end 120 and the settop box 110 is lost, the settop box 110 is connected to a second head end 160 (column 2, lines 40-57; claim 7 – selecting the third endpoint for the communication session).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the communication session of Abdollahi and of Woodall by having the first endpoint to be associated with user directory relating a plurality of users a plurality of endpoint, having the third endpoint to be also associated with the user in the directory, determining the user associated with the first endpoint using the directory, determining that the third endpoint is also associated with the user, and selecting the third endpoint for the communication session as shown by Rahman. This would map a user to its endpoint to ensure a viable connection with a target network (Rahman; column 6, lines 49-59).

In regards to claim 5,

Abdollahi and Woodall disclose the limitations of claims 1 and 2 but Abdollahi and Woodall do not disclose the third endpoint that is a voice mail system associated with a user of the first endpoint.

Referring to Figure 1, Rahman discloses a second head end that is connected to a first head end and then to a settop box. The first head end 120 aggregates data traffic such as voice downstream from the head end 120 to the settop box 110. Additionally, a

settop box 110 aggregates voice traffic upstream from the settop box 110 to the head end for processing by the head end 120. The first head end 120 can establish a connection with the second head end 160 so the second head end 160 completes the connection between the settop box 110 and the target network (user of the first head end 120) (column 2, lines 32-35; column 3, lines 18-26, 40-43; claim 5 - the third endpoint is a voice mail system associated with a user of the first endpoint).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the communication session of Abdollahi and of Woodall by having the third endpoint that is a voice mail system associated with a user of the first endpoint as shown by Rahman. This would links a voice mail system to the target user (Rahman; column 6, lines 49-59).

In regards to claims 6, 26, 36, and 39,

Referring to Figures 1 and 7, Abdollahi discloses a broadcast satellite network that transmits from the source (manager node 212) to remotes sites 202 real-time program information and best-effort data (abstract; paragraphs [0058], [0059], [0067], [0070], [0102] and [0105]; claims 6, 36, and 39 – comprising: establishing a communication session between a first endpoint and a second endpoint).

Referring to Figure 8, Abdollahi discloses a manager node 212, in step S212, periodically transmits an SNMP "keep-alive" message for each open session to a respective router node 230 (paragraph [0112]; claims 6, 26, 36, and 39 - receiving keep alive signals from the first endpoint in a communication with a second endpoint).

Abdollahi also discloses the router node 230 that stops receiving messages for a

session when it does not timely receive the keep-alive message. In other words, the keep-alive message causes the router node 230 to reset its internal timer for a session and not close it (paragraph [0112]; claims 6, 26, 36, and 39 - detecting an interruption in the keep alive signals).

Abdollahi does not disclose: maintaining connection with the second endpoint after the interruption.

Woodall discloses network fault management. Referring to Figure 4, Woodall discloses a communication session is at a normal state 400. If there is a fault in the session, the fault detection and reporting logic will move from the normal state to a fault detected state 402. During state 402, the communication session is maintained and the recovery process begins (paragraph [0038]; claims 6, 26, 36, and 39 - maintaining connection with the second endpoint after the interruption).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the communication session of Abdollahi by maintaining connection with the second endpoint after the interruption as shown by Woodall. This would enable the keep-alive session of Abdollahi to recover from faults without the need to re-initialize while providing necessary time to recover from the fault, in the event that the session is unable to recover from the fault immediately (Woodall; paragraph [0038]).

Abdollahi and Woodall disclose the above limitations of claims 6, 26, 36, and 39 but Abdollahi and Woodall do not disclose: transferring the communication session with the second endpoint from the first endpoint to third endpoint.

Referring to Figure 1, Rahman discloses a first head end 120 that is connected to a settop box 110. When the session between the first head end 120 and the settop box 110 is lost, the settop box 110 is connected to a second head end 160 (column 2, lines 40-57; claims 6, 26, 36, and 39 - transferring the communication session with the second endpoint from the first endpoint to third endpoint).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the communication session of Abdollahi and Woodall by transferring the communication session with the second endpoint from the first end point to a third endpoint as shown by Rahman. This would enable a viable connection, through a third endpoint, with a target network that was lost because of the session failure between the first endpoint and the second endpoint (Rahman; column 2, lines 54-57).

In regards to claim 8,

Abdollahi discloses the limitations of claim 6, but it does not disclose the first endpoint further comprising a reset button, and the first endpoint that is further operable to stop communicating keep alive signals in response a user pressing the reset button.

Referring to Figure 3, Rahman discloses a recovery apparatus 300 that is embedded in a first head end 120. This recovery apparatus 300 is a computer and therefore inherently it comprises a reset button (column 4, lines 9 – 49; claim 8 – the first endpoint further comprises a reset button).

Also inherently, when the reset button is pressed the head end will stop communicating keep alive signals (claim 8 - the first endpoint is further operable to stop communicating keep alive signals in response to a user pressing the reset button).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the communication session of Abdollahi by having the first endpoint further comprising a reset button and having the first endpoint that is further operable to stop communicating keep alive signals in response to a user pressing the reset button as shown by Rahman. This would reestablish a viable connection with a target network (Internet or PSTN) through the first endpoint (Rahman; Figure 1).

In regards to claims 9, 10, 27, 28, and 38,

Abdollahi discloses the limitations of claims 6, 26, and 36, but it does not disclose the first and third endpoints that are interactive voice response servers, status information that is stored for the first endpoint, and the status information that is used to resume the communication session with third endpoint from approximately a point at which the interruption in keep alive signals was detected.

Referring to Figure 1, Rahman discloses a second head end is connected to a first head end and then to a settop box. The first head end 120 aggregates voice traffic downstream from the head end 120 to the settop box 110. Additionally, a settop box 110 aggregates voice traffic upstream from the settop box 110 to the head end for processing by the head end 120 (column 2, lines 32-35; column 3, lines 18-26, 40-43; claims 9, 27, and 38 - the method of claim 6, wherein the first and third endpoints are interactive voice response servers).

Referring to Figure 1, Rahman discloses a database that locates at a mobile

switching center having information for endpoints (column 3, lines 5-12; columns 4, lines 62-67; column 5, lines 1 and 21; claims 10, 28, and 38 - storing status information for the first endpoint).

Referring to Figures 3 and 4, Rahman also discloses a detector 350 that informs a communication manager when the detector detects that a communication is lost. Using the information sent from the mobile switching center 153, the communication manager 340 initiates a connection between the settop box 110 and the second head end 160 (column 4, lines 62-67; column 5, lines 1-6; claims 10, 28, and 38 - using the status information to resume the communication session with third endpoint from approximately a point at which the interruption in keep alive signals was detected).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the communication session of Abdollahi by having the first and third endpoints that are interactive voice response servers, status information that is stored for the first endpoint, and the status information that is used to resume the communication session with third endpoint from approximately a point at which the interruption in keep alive signals was detected, as shown by Rahman. This would enable voice sessions from the endpoints to a target network (Internet or PSTN) (Rahman; column 2, lines 32-38, and 49-54).

Also, this would enable transferring the communication session with the second endpoint from the first endpoint to a third endpoint (Rahman, column 2, lines 39-57)

In regards to claim 12,

Abdollahi discloses the limitations of claim 11 but it does not disclose step of reestablishing that comprises transferring the communication session with the second endpoint from the first endpoint to a third endpoint associated with the user of the first endpoint.

Referring to Figure 1, Rahman discloses a connectivity that is lost between a first head end 120 and a network. A settop box 110 (a second endpoint) establishes connectivity with a second head end 160 (a third endpoint) having a viable connection with the target network (column 2, lines 46-54; claim 12 – the step of reestablishing comprises transferring the communication session with the second endpoint from the first endpoint to a third endpoint associated with the user of the first endpoint).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the communication method of Abdollahi by having the step of reestablishing that comprises establishing a communication session from the second endpoint to the third endpoint and then to the user of the first endpoint as shown by Rahman. This would enable the second endpoint to gain access to the target network (Rahman; column 2, lines 41-54).

In regards to claim 21,

Abdollahi discloses the limitations of claim 17, but it does not disclose: determining an alternate endpoint associated with a user of the first endpoint, and communicating a message to a call manager instructing the call manager to establish the communication session between the second endpoint and the alternate endpoint.

Referring to Figure 3, Rahman discloses a mobile switching center that selects a second head end 160 when a detector 350 detects a connectivity failure between a settop box 110 (second endpoint) and a first head end 120 (column 4, lines 50-67; column 5, lines 1 and 2, and 14-21; claim 21 – determining an alternate endpoint associated with a user of the first endpoint).

Rahman also discloses the mobile switching center that returns an address of a second head end 160 (alternate endpoint) to a communication manager 340. The communication manager 340 then initiates a connection with the second head end 160 (column 5, lines 3-6; claim 21 - communicating a message to a call manager instructing the call manager to establish the communication session between the second endpoint and the alternate endpoint).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the communication method of Abdollahi by determining an alternate endpoint associated with a user of the first endpoint, and communicating a message to a call manager instructing the call manager to establish the communication session between the second endpoint and the alternate endpoint as shown by Rahman. This would enable the second endpoint communicating to the alternate endpoint having a viable connection with the target network (Rahman; column 2, lines 41-54).

In regards to claim 22,

Abdollahi discloses the limitations of claim 19, but it does not disclose: determining an alternate endpoint associated with a user of the first endpoint, and

communicating a message to the alternate endpoint instructing the alternate endpoint to reestablish the communication session with the first endpoint.

Referring to Figure 3, Rahman discloses a mobile switching center that selects a second head end 160 when a detector 350 detects a connectivity failure between a settop box 110 (second endpoint) and a first head end 120 (column 4, lines 50-67; column 5, lines 1 and 2, and 14-21; claim 22 – determining an alternate endpoint associated with a user of the first endpoint).

Referring to Figure 2, Rahman discloses a second type of connectivity failure that is handled by communication networks. A first head end 120 uses a wireless call to establish a connection with a second head end 160 (alternate endpoint) having a viable connection with a network so that the second head end 160 completes the lost connection between a settop box 110 and the target network (column 3, lines 27-43; claim 22 - communicating a message to the alternate endpoint instructing the alternate endpoint to reestablish the communication session with the first endpoint).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the communication method of Abdollahi by determining an alternate endpoint associated with a user of the first endpoint, and communicating a message to the alternate endpoint instructing the alternate endpoint to reestablish the communication session with the first endpoint as shown by Rahman. This would enable the first endpoint communicating to the alternate endpoint having a viable connection with the target network (Rahman; column 3, lines 27-43).

In regards to claims 23, 24, 29, and 30,

Referring to Figure 1, Abdollahi discloses an SNMP keep-alive message that causes each router node 230 to which a message is destined, to maintain a session as open and not time out the session. Since SNMP is an application of the TCP/IP protocol suite, the SNMP keep-alive message may comprise TCP/IP or UDP signaling (paragraph [0112]; claims 23, 24, 29, and 30 - the keep alive signals comprise TCP/IP or UDP signaling).

Abdollahi does not disclose the first endpoint that is coupled to a transport control protocol / Internet protocol (TCP/IP) network carrying packets over UDP, the communication device that is coupled to the TCP/IP network, and the keep alive signals that comprise TCP/IP or UDP signaling.

Referring to Figure 1, Rahman discloses a first head end that is coupled to the Internet. Since there are different kinds of data traffic, e. g., video, data, voice, address information, etc. downstream from a first head end 120 and upstream from a settop box 110 and UDP is part of the TCP/IP protocol suite, packets may be carried over User Datagram Protocol (UDP) (column 2, lines 32-38; claims 23, 24, 29, and 30 - the first endpoint is coupled to a transport control protocol / Internet protocol (TCP/IP) network carrying packets over UDP).

Rahman also discloses a communication device that is coupled to the Internet (claims 23, 24 and 29 – the communication device is coupled to the TCP/IP network).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the communication method of Abdollahi by having the first endpoint that is coupled to a transport control protocol / Internet protocol (TCP/IP) network

carrying packets over UDP, the communication device that is coupled to the TCP/IP network, and the keep alive signals that comprise TCP/IP or UDP signaling as shown by Rahman. This would enable applications to access the connectionless feature of IP for delivery of packets to a remote user (Rahman; column 2, lines 32-38). This would also enable a router node 230 to reset its internal timer for a session and not close it (Abdollahi; paragraph [0112]).

In regards to claim 25,

Abdollahi discloses the limitations of claims 16 and 17, but it does not disclose the first endpoint comprising a voice-over-Ip (VoIP) telephone, and the third endpoint comprising a cellular telephone associated with a user of the VoIP telephone.

Referring to Figure 1, Rahman discloses a first head end 120 (a first end point) that is coupled to the Internet. The first head end 120 aggregates voice traffic downstream from the head end 120 to the settop box 110. Additionally, a settop box 110 aggregates voice traffic upstream from the settop box 110 to the head end for processing by the head end 120 (column 2, lines 33-38; column 3, lines 18-26; claim 25 - the first endpoint comprises a voice-over-Ip (VoIP) telephone).

Referring to Figure 1, Rahman discloses a first head end 120 that can establish a connection with the second head end 160 (as a third end point mentioned in this claim) through the Internet so the second head end 160 completes the connection between the settop box 110 and the target network (user of the first head end 120). Rahman also discloses wireless communication links that connect the second head end to networks

(column 2, lines 32-35; column 3, lines 18-26, 40-43; claim 25 - the third endpoint comprises a cellular telephone associated with a user of the VoIP telephone).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the communication method of Abdollahi by having the first endpoint comprising a voice-over-Ip (VoIP) telephone, and the third endpoint comprising a cellular telephone associated with a user of the VoIP telephone as shown by Rahman. This would enable the voice communication over the Internet and the wireless communication from the first endpoint to the third endpoint via the mobile switching center (Rahman; Figure 1).

In regards to claim 31,

Abdollahi discloses the limitations of claim 26, but it does not disclose the processor that is further operable to transfer the communication session automatically in response to a message from the first endpoint.

Referring to Figures 3 and 4, Rahman also discloses a detector 350 that is embedded in a first head end 120. When the detector detects that a communication is lost, it informs a communication manager. Using the information sent from the mobile switching center 153, the communication manager 340 initiates a connection between the settop box 110 and the second head end 160 (column 4, lines 16-17, 62-67; column 5, lines 1-6; claim 31 - the communication device of claim 26, wherein the processor is further operable to transfer the communication session automatically in response to a message from the first endpoint).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the communication method of Abdollahi by having the processor that is further operable to transfer the communication session automatically in response to a message from the first endpoint as shown by Rahman. This would enable the second endpoint communicating to the alternate endpoint having a viable connection with the target network (Rahman; column 2, lines 41-54).

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abdollahi et al., in view of Woodall, and Buhler et al. as applied to claim 13, and further in view of Rahman.

Referring to Figure 8, Abdollahi discloses a manager node 212, in step S212, periodically transmits an SNMP "keep-alive" message for each open session to a respective router node 230. The keep-alive message is used to keep a session open, and to keep the session from timing out (paragraphs [0093] and [0112]; claim 14 - if not within the predetermined time period).

Abdollahi does not disclose a transfer of the communication session with the second endpoint from the first endpoint to third endpoint associated with the user of the first endpoint.

Referring to Figure 1, Rahman discloses a first head end 120 that is connected to a settop box 110. When the session between the first head end 120 and the settop box 110 is lost, the settop box 110 is connected to a second head end 160 (column 2, lines 40-57; claim 14 - transferring the communication session with the second endpoint from the first endpoint to third endpoint associated with the user of the first endpoint).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the communication method of Abdollahi by having the processor that is further operable to transfer the communication session automatically in response to a message from the first endpoint as shown by Rahman. This would enable the second endpoint communicating to the alternate endpoint having a viable connection with the target network (Rahman; column 2, lines 41-54).

Abdollahi, Woodall, and Rahman disclose the limitations of claims 11 and 13, but Abdollahi, Woodall, and Rahman do not disclose: instructing the first endpoint to reset.

Referring to Figure 1, Buhler discloses a packet telephony device that may be configured to reboot or reset with only absolutely necessary software when it is instructed to do so by the control device (column 3, lines 50-59; claims 13 - instructing the first endpoint to reset).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the communication session of Abdollahi by transferring the communication session with the second endpoint from the first end point to a third endpoint associated with the user of the first endpoint as shown by Woodall and Rahman if the first endpoint does not successfully reset within the predetermined period of time. This would enable a viable connection, through a third endpoint, with a target network that was lost because of the session failure between the first endpoint and the second endpoint (Rahman; column 2, lines 54-57).

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abdollahi et al., in view of Woodall, and further in view of Shaffer et al. (US Pat. No. 6,700,901 B1).

Abdollahi discloses the limitations of claim 19 but it does not disclose the point-to-point communication session that uses Session Initiation Protocol (SIP) or H.323.

Referring to Figure 1, Shaffer discloses the point-to-point telephony session between a LAN and a digital phone using the H.323 protocol (Abstract; column 3, lines 33-38; claim 20 - the point-to-point communication session is established using Session Initiation Protocol (SIP) or H.323).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the point-to-point communication session of Abdollahi by using H.323 to establish the point-to-point communication session as shown by Shaffer. This would allow H.323 terminals and equipment carry multimedia communications (real-time voice, video and/or data) (Shaffer; column 3, lines 33-38).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Michaud et al. (US Pat. No. 6,498,779 B1) discloses Multiple Endpoint Paths.

Croslin et al. (US Pat. No. 5,832,196) discloses Dynamic Restoration Process For A Telecommunications Network.

Burns et al. (US Pub. No. 2001/0043561 A1) discloses Methods and Apparatus For Recovering From A Signal Failure In A Switch Connection Data Transmission Network.

Berg et al. (US Pat. No. 6,674,713 B1) discloses Method and Apparatus For Providing Continuous Voice and Call Communications Between A Data Network and A Telephony Network.

Dendi (US Pat. No. 5,805,691) discloses System and Method For Safely and Efficiently Redirecting A Telephone Call.

Shen (US Pat. No. 6,590,868 B2) discloses Methods and Apparatus for Restart Communication Between Network Elements.

Michielsens et al. (US Pub. No. 2002/0026515 A1) discloses Data Network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hao X. Nguyen whose telephone number is 571-272-8195. The examiner can normally be reached on M-F 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-8195. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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